

REMARKS/ARGUMENTS

The claims remaining in the present application are Claims 1-12 and 14-34. Various claims are being amended as shown above. The claim amendments clarify the claim language and are not intended to limit the scope of the claims, unless the claim language is expressly quoted in the following remarks to distinguish over the cited art.

35 U.S.C. §103

In the rejection Claims 1-4, 6, 10-12, and 17 were rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sanchez-Frank et al. US Patent No. 5,394,522 (hereinafter, Sanchez) and Ohara et al. US Patent No. 6,366,300 (hereinafter, Ohara). The Applicants respectfully traverse the rejection.

Claim 1 recites a *"method for configuring input/output connections in a PSOC ... and selecting options for ... configuring ... input/output connections from a selection set presented."*

Sanchez discloses a "method of operation by which a network administrator ... graphically depict a network by defining ... workstation nodes, ... the protocols, ... and based upon such network ... and constraints ... generate configuration parameters." (See Sanchez, col. 2, lines 12-21). Furthermore, "window 12 is the dialog window ... which was selected from the choices in pane 9 ... used to specify the characteristics of the node in terms of machine type, node type and card (DLC) capability." (See Sanchez, col. 3-4, lines 64-2).

Claim 1 distinguishes over Sanchez by at least reciting “configuring input/output connections.” In contrast, Sanchez is directed to generating configuration parameters. “*Configuring ... input/output connections*” differs from generating configuration parameters because it physically configures the connections.

The rejection admits that Sanchez does not teach configuring connection in a PSOC device and the output device is an output pin. To overcome this defect the rejection relies on Ohara. However, Ohara does not remedy the physical configuration defect of Sanchez.

Therefore, even if Ohara teaches configuring input/output connections in a PSOC device and the input/output device is an input/output pin, the combination of Sanchez and Ohara does not teach the limitations of Claim 1. Accordingly the combination of Sanchez and Ohara does not render Claim 1 obvious under 35 USC 103.

Moreover, Ohara discloses a “visual programming tools ... used as a programming language of a programmable logic controller (PLC).” (See Ohara, col. 1, lines 20-22). Ohara further discloses that “in order to automatically generate a program of a PLC, the user executes the steps of selecting an output signal.” (See Ohara, col. 16, lines 30-32).

Ohara teaches away from using “*an input connection*” because Ohara discloses that “in order to generate a program” the user must select an “output signal.” Therefore, it would not have been obvious to one of ordinary skill in the

art, to create a configuration interface for input pin connections. Hence, Claim 1 is distinguishable over Ohara by reciting "*configuring input/output connections in a PSOC.*" Ohara does not disclose nor suggest a PSOC, which is the most complex of the reprogrammable logic devices, but rather discloses a PLC.

Therefore, not only does the combination of Sanchez and Ohara not disclose "*configuring ... input/output connection*" in a PSOC, but in fact using Ohara teaches away from configuring input pin connection as recited in Claim 1. Therefore, Claim 1 is patentable over Sanchez in view of Ohara under 35 USC 103. As such allowance of Claim 1 is earnestly solicited.

Claims 2-9 depend from Claim 1 and are each patentable at least for the same reasons that Claim 1 is patentable, under 35 USC 103, over Sanchez and Ohara. As such allowance of Claims 2-9 is earnestly solicited.

As to Claims 3 and 17, the rejection asserted that Sanchez "teaches that said programmable device comprises a programmable microcontroller device (inherent)." However, "to establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49

USPQ2d 1949, 1950-51 (Fed. Cir. 1999). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

As such the Applicants respectfully invite the Examiner to introduce extrinsic evidence to establish the alleged inherency or to kindly withdraw the rejections. As such allowance of Claims 3 and 17 is earnestly solicited.

With respect to independent Claim 10, Claim 10 recites "*a PSOC device electronically and communicatively coupled with said computing device.*"

Sanchez discloses "a system and method for configuring communication and database networks ... and automatically generating related configuration files." (See Sanchez, Abstract).

Sanchez does not disclose nor suggest coupling a PSOC device because Sanchez is directed to generating configuration files and as a result no coupling of a physical device is suggested nor disclosed. Ohara does not remedy the shortcoming of Sanchez, coupling a PSOC device.

Therefore, the combination of Sanchez and Ohara does not teach the limitations of Claim 10. Accordingly combination of Sanchez and Ohara does not render Claim 10 obvious under 35 USC 103.

Moreover, the rejection admits that Sanchez does not teach configuring pin data in a PSOC device. To overcome this defect the rejection relies on Ohara. As discussed above Ohara does not disclose nor suggest a PSOC and in fact teaches away from using "*an input connection.*"

Therefore, not only the combination of Sanchez and Ohara does not disclose coupling a PSOC device, but in fact using Ohara teaches away from configuring input pin connection in a PSOC. Therefore, combination of Sanchez and Ohara does not render Claim 10 obvious under 35 USC 103. As such allowance of Claim 10 is earnestly solicited.

Claims 11-12 and 14-17 depend from Claim 10 and are each patentable over Sanchez in view of Ohara, under 35 USC 103, at least for the same reasons that Claim 10 is patentable. As such allowance of Claims 11-12 and 14-17 is earnestly solicited.

In the rejection Claims 8 and 15 were rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sanchez, Ohara, and Bergeron et al. (US Patent No. 6,246,410) (hereinafter Bergeron). The Applicants respectfully traverse the rejection.

With respect to dependent Claims 8 and 15, Claims 8 and 15 depend from Claims 1 and 10 respectively and are each patentable over Sanchez and Ohara,

under 35 USC 103, at least for the same reasons that Claims 1 and 10 are patentable.

In addition to the rationale described above, dependent Claim 8 adds further limitations, which are not shown by the cited combination, even with the addition of Bergeron. For example, Claim 8 recites *"selecting of options ... from a pop-up window."*

The rejection admits that Sanchez and Ohara do not disclose *"selecting ... from a pop-up window."* To overcome this defect the rejection relies on Bergeron.

Bergeron discloses that, "information content of the rows of the result set is displayed by positioning the mouse cursor over one of the data controls to display a pop-up window." (See Bergeron, col. 9, lines 9-14).

Bergeron does not disclose nor suggest *"selecting of options ... from a pop-up window"* but is rather directed to merely displaying a pop-up window.

Therefore, not only does Bergeron fail to cure the defects of Sanchez and Ohara mentioned above, but it further fails to disclose *"selecting of options ... from a pop-up window."* Therefore, the combination of Sanchez, Ohara, and Bergeron does not render Claim 8 obvious under 35 USC 103. As such allowance of Claim 8 is earnestly solicited.

Claim 15 is similar in scope to Claim 8 and it is patentable, under 35 USC 103, over Sanchez, Ohara, and Bergeron at least for the same rationale that Claim 8 is patentable. As such allowance of Claim 15 is earnestly solicited.

In the above referenced Office Action, Claim 9 was rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sanchez, Ohara, Bergeron, and Livingston et al. (US Patent No. 6,750,889) (hereinafter Livingston). The Applicants respectfully traverse the rejection.

Claim 9 depend from Claim 8 and is patentable over Sanchez, Ohara, and Bergeron, under 35 USC 103, at least for the same rationale as Claim 8.

In addition to the rationale described above, dependent Claim 9 adds further limitations, which are not shown by the cited combination, even with the addition of Livingston. For example, Claim 9 teaches the combination of a *"drop-down list"* and *"a pop-up window."*

The rejection asserted that "it is known in the art that drop-down list is used such that display region is not obscured" furthermore the rejection asserted that "it is known in the art that pop-up window is used such that display region is not obscured." As such, combination of a *"drop-down list"* and *"a pop-up window"* to achieve the same goal would be redundant and hence not obvious.

Additionally, the Applicants respectfully submit that the determination of obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit parameters of the present invention. There must be teaching or suggestion within the prior art to select the particular elements, and to combine them in the way they were combined by the inventors.

Therefore, combination of Sanchez, Ohara, Bergeron, and Livingston does not render Claim 9 obvious under 35 USC 103. As such allowance of Claim 9 is earnestly solicited.

In the rejection Claims 18-28 were rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sanchez, Ohara, Bergeron, and Livingston. The Applicants respectfully traverse the rejection.

Claim 18 recites *"configuration of a PSOC ... comprising: ... a pin configuration parameters table; a pop-up window, ... and a drop-down list ... to accept user input commands in the process of configuring said PSOC."*

Sanchez discloses that, "a connection dialog window is not necessary in that the connection parameters are derivable by matching the connection network selected from pane 11." (See Sanchez, col. 4, lines 21-24 and See FIG. 4). Sanchez discloses that, "once the dialog information ... has been entered ... the functional characteristics of node 13 are established." (See Sanchez, col. 4, lines 11-14).

Claim 18 is distinguishable over Sanchez by at least reciting *"configurable parameters table."* Sanchez discloses that, "the connection parameters are derived by matching the connection network selected from pane 11," and connection network in pane 11 in Figure 4 does not show *"a configurable parameters table."*

Sanchez neither discloses nor suggests *"configuring said PSOC"* but rather is directed to "functional characteristics of node 13."

The rejection admits that Sanchez does not teach a pop-up window. To overcome this defect, the rejection relies on Bergeron. However, even if Bergeron teaches a pop-up window, the combination of Bergeron with Sanchez does not cure the defects of Sanchez mentioned above.

Moreover, Bergeron does not disclose nor suggest *"selecting options"* from *"a pop-up window,"* as discussed before. As such addition of Bergeron does not teach selecting options from a pop-up window.

The rejection admits that Sanchez does not teach a drop-down list. To overcome this defect the rejection relies on Livingston. However, even if Livingston teaches a drop-down list, the combination of Livingston with Sanchez and Bergeron does not cure the defects of Sanchez and Bergeron as mentioned above.

Moreover, combination of a *"drop-down list"* and *"a pop-up window"* is not obvious to one skilled in the art as discussed before. As such, the addition of Livingston does not render obvious the combination of a dropdown list with a pop-up window.

The rejection admits that Sanchez does not teach that the input/output device is an input/output pin in a PSOC device. To overcome this defect the rejection relies on Ohara. However, even if Ohara teaches that the input/output device is an input/output pin in a PSOC device, the combination of Ohara with Livingston, Sanchez, and Bergeron does not cure the defects of Sanchez, Bergeron, and Livingston as mentioned above.

Moreover, Ohara does not disclose nor suggest that the input/output device is an input/output pin in a PSOC and in fact teaches away from using "*an input connection*," as discussed above. As such, the addition of Ohara does not teach using input/output pin in a PSOC device.

Accordingly combination of Sanchez, Bergeron, Livingston, and Ohara does not render Claim 18 obvious under 35 USC 103. As such allowance of Claim 18 is earnestly solicited.

Claims 19-28 depend from Claim 18 and are each patentable, under 35 USC 103, at least for the same reasons that Claim 18 is patentable over Sanchez, Bergeron, Livingston, and Ohara under 35 USC 103.

Claim 20 is similar in scope to Claims 3 and 17 and the Applicants respectfully invite the Examiner to provide extrinsic evidence to establish the alleged inherency or to kindly withdraw the rejection. As such allowance of Claim 20 is earnestly solicited.

Claim 21 is similar in scope to Claim 2 and is patentable over the cited art under 35 USC 103 at least for the same rationale as Claim 2. As such allowance of Claim 21 is earnestly solicited.

Claim 22 is similar in scope to Claim 8 and is patentable over the cited art, under 35 USC 103 at least for the same rationale as Claim 8. As such allowance of Claim 22 is earnestly solicited.

Claim 24 is similar in scope to Claim 18 and is patentable over the cited art, under 35 USC 103 at least for the same rationale as Claim 8. As such allowance of Claim 24 is earnestly solicited.

Claims 25 and 27 recite *"configuration parameters table"* and where the *"drop-down list comprises selection options pertinent to the configuration,"* respectively.

Sanchez discloses that, "a connection dialog window is not necessary in that the connection parameters are derivable by matching the connection network selected from pane 11." (See Sanchez, col. 4, lines 21-24 and See FIG. 4).

Claims 25 and 27 are distinguishable over Sanchez by at least reciting *"configurable parameters table,"* and *"said drop-down list comprises selection options,"* respectively. Sanchez discloses that "connection parameters are derived by matching the connection network selected from pane 11." The connection network in pane 11 in Figure 4 does not show *"a configurable parameters table,"* nor suggest a *"drop-down list."*

Accordingly, the combination of the cited art does not render Claims 25 and 27 obvious under 35 USC 103. As such allowance of Claims 25 and 27 is earnestly solicited.

Claims 26 and 28 are similar in scope to Claims 16 and 15 respectively, and are patentable over the cited art, under 35 USC 103, at least for the same rationale that Claims 16 and 15 are patentable respectively.

Moreover, as to Claim 28, Livingston does not disclose nor suggest that, *"pop-up window disappears ... when a mouse-click is made outside said pop-up window."* The Applicants assert that it is in no way inherent for a pop-up window to disappear upon a mouse-click outside of the pop-up window. As such, the Applicants respectfully invite the Examiner to provide extrinsic evidence to establish the alleged inherency or kindly withdraw the rejection. As such allowance of Claim 28 is earnestly solicited.

In the above referenced Office Action, Claims 29-34 were rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sanchez, Ohara, and Livingston. The Applicants respectfully traverse the rejection.

Independent Claim 29 recite *"a tool for programming a PSOC ... comprising: ... a window displayed in response to a selection of an input/output pin ... comprises a list of selectable attributes for assigning said input/output pin."*

Sanchez discloses "a system and method for configuring communication and database networks." (See Sanchez, Abstract). Furthermore, Sanchez discloses that pane 9 contains "a workstation/communication link device/data storage device

selection pane,” (See Sanchez, col. 3, lines 58-60) and that “a connection dialog window is not necessary in that the connection parameters are derivable by matching the connection network selected from pane 11.” (See Sanchez, col. 4, lines 21-24). Finally, Sanchez discloses “a network configuration and protocol definition pane, generally at 11.” (See Sanchez, col. 3, lines 60-61).

Claim 29 is distinguishable because Sanchez is directed to “configuring communication and database networks” and not configuration of a programmable device. Furthermore, Sanchez does not disclose nor suggest *“a list of selectable attributes for assigning said input/output pin”* because it discloses that “connection parameters are derivable by matching the connection network.” Consequently, instead of supplying a list of selectable attributes, Sanchez derives the parameters by matching the connection network.

The rejection admits that Sanchez does not teach a *“window displayed in response to a selection of data item.”* To overcome this defect the rejection relies on Livingston. However, even if Livingston teaches a window displayed in response to a selection of data item, the combination of Sanchez and Livingston does not cure the shortcomings of Sanchez as mentioned above.

Moreover, Livingston discloses “a user interface apparatus ... configured to display visual images.” (See Livingston, Abstract). Furthermore, Livingston utilizes a drop-down list.

Livingston does not disclose nor suggest *“a window displayed in response to a selection of an input/output pin.”* In contrast, Livingston is directed to configuring

apparatus to display visual images that utilizes a drop-down list. A *"window displayed in response to a selection"* differs from a drop-down list.

The rejection admits that Sanchez does not teach that the output device is an output pin in a PSOC device. To overcome this defect the rejection relies on Ohara. However, even if Ohara teaches that the input/output device is an input/output pin in a PSOC device, the combination of Ohara with Sanchez and Livingston does not cure the shortcomings of Sanchez and Livingston as mentioned.

Moreover, as discussed before Ohara does not disclose nor suggest PSOC and it teaches away from using *"an input connection."* Therefore, it would not have been obvious to one of ordinary skill in the art, to create a configuration interface for input/output pin connections.

Therefore, the combination of Sanchez, Ohara, and Livingston does not render Claim 29 obvious under 35 USC 103. As such allowance of Claim 29 is earnestly solicited.

Claims 30-34 depend from Claim 29 and are each patentable, under 35 USC 103, at least for the same reasons that Claim 29 is patentable over Sanchez, Livingston, and Ohara. As such allowance of Claims 30-34 is earnestly solicited.

In addition to the rationale described above, dependent Claim 32 adds further limitations, which are not shown by the cited art combination, even with the addition

of Livingston. For example, Claim 32 recite that, *"window automatically disappears if said cursor device makes a selection outside of said window."*

Livingston discloses that, "a user controlling pointer ... clicks drop-down list ... for adjusting the scope of user interface 75." (See Livingston, col. 7, lines 28-31).

Livingston does not disclose nor suggest that, *"window ... disappears if said cursor device makes a selection outside of said window."* The Applicants assert that it is in no way inherent for a drop-down list to disappear when a mouse-click is made outside of the pop-up window. As such, the Applicants respectfully invite the Examiner to provide extrinsic evidence to establish the alleged inherency or kindly withdraw the rejection.

Accordingly the combination of Sanchez, Ohara, and Livingston does not render Claim 32 obvious under 35 USC 103. As such allowance of Claims 32 is earnestly solicited.

In addition to the rationale described above, dependent Claim 34 adds further limitations, which are not shown by the cited art combination, even with the addition of Livingston. For example, Claim 34 recites *"window ... displayed in response to a selection of a cell of said tabular display."*

Livingston utilizes a "drop-down" list.

A "drop-down" list differs from *"tabular display."* Accordingly the combination of Sanchez, Livingston, and Ohara does not render Claim 34 obvious under 35 USC 103. As such allowance of Claim 34 is earnestly solicited.

In addition to the rationale described above, dependent Claim 33 adds further limitations, which are not shown by the cited art combination, even with the addition of Ohara. For example, Claim 33 recites *"a tabular display ... comprising ... a column for pin name, a column for pin type and a column for drive type."*

Ohara discloses an "ICON LIST" and a "layout diagram window 3601 includes a layout area 3620," which "corresponds to output pins of an actual programmable logic controller (PLC)." (See Ohara, col. 44, lines 20-32 and See FIG. 36).

Ohara does not disclose nor suggest *"a column for pin name, a column for pin type and a column for drive type"* corresponding to each input/output pin but rather directs to an "ICON LIST" and "output pins of an programmable logic controller."

Accordingly the combination of Sanchez, Livingston, and Ohara does not render Claim 33 obvious under 35 USC 103. As such allowance of Claim 33 is earnestly solicited.

For the above reasons, the Applicants requests reconsideration and withdrawal of these rejections under 35 U.S.C. §103.

CONCLUSION

In light of the above listed amendments and remarks, reconsideration of the rejected Claims is requested. Based on the arguments and amendments presented above, it is respectfully submitted that Claims 1-12 and 14-34 overcome the rejections of record and, therefore, allowance of Claims 11-12 and 14-34 is earnestly solicited.

Should the Examiner have a question regarding the instant amendment and response, the Applicants invite the Examiner to contact the Applicants' undersigned representative at the below listed telephone number.

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